

AMENDMENT TO THE CLAIMS

Claims 1-98 (cancelled)

Claim 99 (previously presented): An isolated and purified polynucleic acid encoding a biologically active *piwi* family polypeptide comprising an amino acid sequence as set forth in any of SEQ ID NOs: 2, 4 and 6.

Claim 100 (previously presented): The polynucleic acid of claim 99, further comprising a *piwi* family-encoding polynucleic acid sequence as set forth in any of SEQ ID NOs: 1, 3 and 5.

Claim 101 (previously presented): An isolated and purified polynucleic acid encoding a biologically active *piwi* family polypeptide, wherein the polynucleic acid is at least about 75% identical to a sequence as set forth in any of SEQ ID NOS: 1, 3, and 5, and wherein the polypeptide comprises the PIWI box.

Claim 102 (previously presented): The polynucleic acid of Claim 101, wherein the encoded polypeptide comprises a vertebrate *piwi* family polypeptide.

Claim 103 (previously presented): The polynucleic acid of Claim 101, wherein the encoded polypeptide comprises a mammalian *piwi* family polypeptide.

Claim 104 (previously presented): The polynucleic acid of claim 101, wherein the encoded polypeptide comprises a human *piwi* family polypeptide.

Claim 105 (previously presented): The polynucleic acid of claim 101, further defined as a DNA segment.

Claim 106 (previously presented): A recombinant vector comprising the polynucleic acid of claim 101.

Claim 107 (previously presented): The recombinant vector of claim 106, wherein the vector is a recombinant expression vector.

Claim 108 (previously presented): The recombinant vector of claim 106 further defined as comprising at least a 1,000 nucleotide long contiguous stretch of a polynucleic acid sequence as essentially set forth in any of SEQ ID NOs: 1, 3 and 5.

Claim 109 (previously presented): A recombinant host cell comprising the recombinant vector of claim 106.

Claim 110 (previously presented): The recombinant host cell of claim 109, wherein the host cell is a procaryotic cell.

Claim 111 (previously presented): The recombinant host cell of claim 109, wherein the host cell is a eukaryotic cell.

Claim 112 (previously presented): A method of preparing a *piwi* family polypeptide, comprising: transforming a cell with the polynucleic acid of claim 101 to produce a *piwi* family under conditions suitable for the expression of said polypeptide.